

WE CLAIM:

1 1. A vented hollow plastic block for use in a wall section or panel, said plastic block
2 comprising in combination;
3 a) a pair of members, each of said members including a continuous side wall, said
4 side wall of one of said members including a lip and said side wall of the other of said members
5 including a shelf for receiving and mating with said lip and forming a junction;
6 b) a sheet adapted for partly reflecting solar radiation, said sheet of material being
7 located interior of and extending across said plastic block, said sheet including a first layer of a
8 film, a second layer of a film and a coating layer disposed intermediate said first and second
9 layers of film; and
10 c) a vent extending through one of said side walls.

1 2. The vented hollow plastic block as set forth in Claim 1 wherein the said vent has
2 an area equivalent to a circle having a diameter in the range of about 0.005 inches to about 0.25
3 inches.

1 3. The vented hollow plastic block as set forth in Claim 2 wherein said vent has an
2 area equivalent to a circle having a diameter in the range of about 0.012 inches to about 0.015
3 inches.

1 4. The vented hollow plastic block as set forth in Claim 1 wherein each of said
2 members is made of translucent plastic material.

1 5. The vented hollow plastic block as set forth in Claim 1 wherein each of said
2 members is made of transparent plastic material.

1 6. The vented hollow plastic block as set forth in Claim 1 wherein said sheet defines
2 two compartments within said plastic block.

1 7. The vented hollow plastic block as set forth in Claim 6 wherein said sheet
2 includes a slot adapted to provide fluid communication between said two compartments.

1 8. The vented hollow plastic block as set forth in Claim 7 wherein said slot is
2 essentially coincident with said vent.

1 9. The vented hollow plastic block as set forth in Claim 1 wherein said sheet is
2 disposed at said junction.

1 10. The vented hollow plastic block as set forth in Claim 9 wherein the peripheral
2 edge of said sheet is coincident with said shelf and retained thereagainst by said lip.

1 11. The vented hollow plastic block as set forth in Claim 10 including an adhesive for
2 securing said sheet in place within said plastic block.

1 12. The vented hollow plastic block as set forth in Claim 9 including an adhesive for
2 securing said sheet in place within said plastic block.

1 13. The vented hollow plastic block as set forth in Claim 1 wherein said first layer of
2 film is a clear polyester film.

1 14. The vented hollow plastic block as set forth in Claim 13 wherein said first layer of
2 film is about 6.5mil thick.

1 15. The vented hollow plastic block as set forth in Claim 1 wherein said coating layer
2 is a spectrally selective layer.

1 16. The vented hollow plastic block as set forth in Claim 15 wherein said coating
2 layer is a nickel alloy sputter coating layer.

1 17. The vented hollow plastic block as set forth in Claim 1 wherein said second layer
2 of film is a clear polyester film.

1 18. The vented hollow plastic block as set forth in Claim 17 wherein said second layer
2 of film is about 0.25mil thick.

1 19. The vented hollow plastic block as set forth in Claim 13 wherein said coating

2 layer is a nickel alloy sputter coating layer.

1 20. The vented hollow plastic block as set forth in Claim 19 wherein said second layer
2 of film is a clear polyester film.

1 21. The vented hollow plastic block as set forth in Claim 1 wherein the U-factor of
2 said plastic block is equal to or less than about 0.35.

1 22. The vented hollow plastic block as set forth in Claim 1 wherein the solar gain
2 performance is equal to or less than about 0.39.

1 23. A vented hollow plastic block for use in a wall section, said plastic block
2 comprising in combination;

3 a) a pair of members, each of said members including a continuous side wall and
4 defining an edge, said edge of one of said members being mated with said edge of the other of
5 said members to form a junction;

6 b) a vent disposed in at least one of said side walls, said vent having an area
7 equivalent to a circle having a diameter in the range of about 0.005 inches to about 0.025 inches;

8 c) a sheet disposed within said plastic block and supported by said side wall of at
9 least one member of said pair of members and adapted to define two compartments within said
10 plastic block, said sheet including a first layer of a film, a second layer of a film and a coating
11 layer disposed intermediate said first and second layers of film; and

12 d) a further vent disposed in said sheet for providing fluid communication
13 between said two compartments.

1 24. The vented hollow plastic block as set forth in Claim 23 wherein said aperture has
2 an area equivalent to a circle having a diameter in the range of about 0.012 inches to about 0.015
3 inches.

1 25. The vented hollow plastic block as set forth in Claim 23 wherein said vent and
2 said further vent are substantially coincident.

1 26. The vented hollow plastic block as set forth in Claim 25 wherein said vent and
2 said further vent are juxtaposed with one another.

1 27. The vented hollow plastic block as set forth in Claim 23 wherein each of said
2 members is made of translucent plastic material.

1 28. The vented hollow plastic block as set forth in Claim 23 wherein each of said
2 members is made of transparent plastic material.

1 29. The vented hollow plastic block as set forth in Claim 23 wherein each of said
2 members is square in planform and wherein said sheet is square in planform.

1 30. The vented hollow plastic block as set forth in Claim 23 wherein said first layer of
2 film is a clear polyester film.

1 31. The vented hollow plastic block as set forth in Claim 30 wherein said first layer of
2 film is about 6.5mil thick.

1 32. The vented hollow plastic block as set forth in Claim 23 wherein said coating
2 layer is a nickel alloy sputter coating layer.

1 33. The vented hollow plastic block as set forth in Claim 32 wherein said coating
2 layer is a spectrally selective layer.

1 34. The vented hollow plastic block as set forth in Claim 23 wherein said second layer
2 of film is a clear polyester film.

1 35. The vented hollow plastic block as set forth in Claim 34 wherein said second layer
2 of film is about 0.25mil thick.

1 36. The vented hollow plastic block as set forth in Claim 23 wherein said coating
2 layer is a nickel alloy sputter coating layer.

1 37. The vented hollow plastic block as set forth in Claim 36 wherein said second layer

2 of film is a clear polyester film.

1 38. The vented hollow plastic block as set forth in Claim 23 wherein the U-factor of
2 said plastic block is equal to or less than about 0.35.

1 39. The vented hollow plastic block as set forth in Claim 23 wherein the solar gain
2 performance is equal to or less than about 0.39.

1 40. A vented hollow translucent/transparent plastic block of use in a wall section, said
2 plastic block comprising in combination;

3 a) a pair of members, each of said members including a continuous side wall;
4 b) a sheet extending across the interior of said plastic block, said sheet including a
5 first layer of a film, a second layer of a film and a coating layer disposed intermediate said first
6 and second layers of film;

7 c) said side wall of one of said members being in sealed engagement with said
8 side wall of the other of said members; and

9 d) a vent disposed in one of said side walls and adapted to be in fluid
10 communication with the interior of said plastic block.

1 41. The vented hollow translucent/transparent plastic block as set forth in Claim 40
2 wherein said vent having an area equivalent to a circle having a diameter in the range of about
3 0.005 inches to about 0.25 inches.

1 42. The vented hollow translucent/transparent plastic block as set forth in Claim 41
2 wherein said vent has an area equivalent to a circle having a diameter in the range of about 0.012
3 inches to about 0.015 inches.

1 43. The vented hollow translucent/transparent plastic block as set forth in Claim 40
2 wherein said sheet defines two compartments within said plastic block.

1 44. The vented hollow translucent/transparent plastic block as set forth in Claim 43
2 wherein said sealed engagement is adapted to support said sheet.

1 45. The vented hollow translucent/transparent plastic block as set forth in Claim 44
2 wherein said vent is formed at the junction of said side walls including a further vent disposed in
3 said sheet.

1 46. The vented hollow translucent/transparent plastic block as set forth in Claim 45
2 wherein said further vent is substantially coincident with said vent.

1 47. The vented hollow plastic block as set forth in Claim 40 wherein said first layer of
2 film is a clear polyester film.

1 48. The vented hollow plastic block as set forth in Claim 47 wherein said first layer of

2 film is about 6.5mil thick.

1 49. The vented hollow plastic block as set forth in Claim 40 wherein said coating
2 layer is a spectrally selective layer.

1 50. The vented hollow plastic block as set forth in Claim 49 wherein said coating
2 layer is a nickel alloy sputter coating layer.

1 51. The vented hollow plastic block as set forth in Claim 40 wherein said second layer
2 of film is a clear polyester film.

1 52. The vented hollow plastic block as set forth in Claim 51 wherein said second layer
2 of film is about 0.25mil thick.

1 53. The vented hollow plastic block as set forth in Claim 40 wherein said coating
2 layer is a nickel alloy sputter coating layer.

1 54. The vented hollow plastic block as set forth in Claim 53 wherein said second layer
2 of film is a clear polyester film.

1 55. The vented hollow plastic block as set forth in Claim 40 wherein the U-factor of
2 said plastic block is equal to or less than about 0.35.

1 56. The vented hollow plastic block as set forth in Claim 40 wherein the solar gain
2 performance is equal to or less than about 0.39.